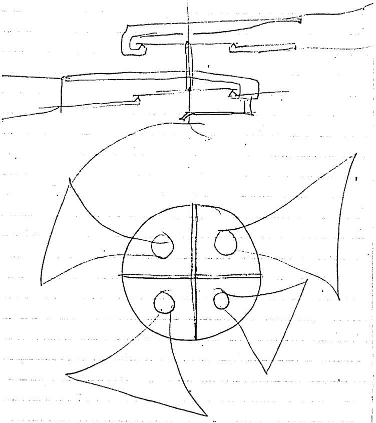
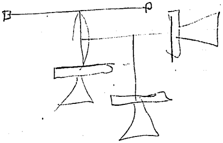
## Notebook, N-10-09-23

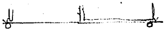
This notebook is a continuation of N-10-04-10. It was used during September 1910. All entries are by Edison. It is the third of three books that contain notes and drawings regarding phonograph recording apparatus. Several entries detail the use of motograph and telephone technology as means of improving recording fidelity. At the end of the book are drawings of phonograph cabinet designs. The front cover is marked "Phonograph Sept. 1910." The pages are unnumbered. Approximately 50 pages have been used.

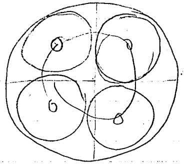
Sept 23 · 1910 —

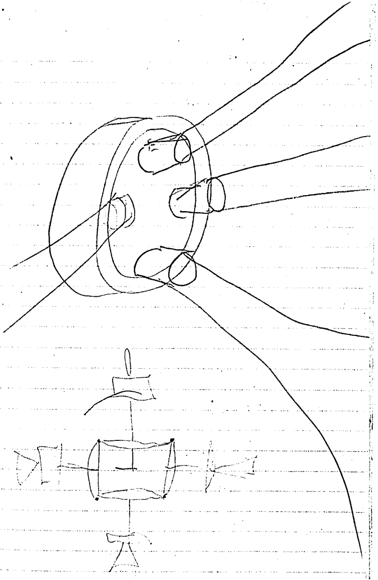
Phono - recorder



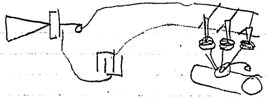






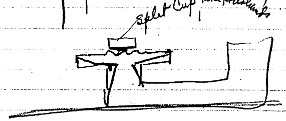


Sept 23 1910



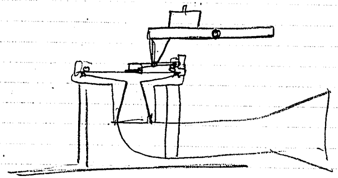
Try Multiple & in series -

also holding 3. Bells in front of funnel with small funnels pointing towards phono funnel + have switches to each so see if loudness increase by adding phones



Try Anthracite granules - Magnetite -
High Res varieties of Tungsten bronze
+ other things -

Sept 23 1910



Silver fused Lamp black.

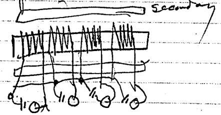
2 of these –

Also use 2 Reg Telephone

Multiple & series with

funnels –

Possibly if induction coil used


secondary
110
110
110
110

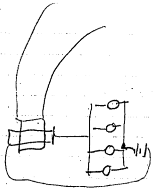
2)96
48

8 X 8

12 X 8

1.5
1.5
75
15
2.75

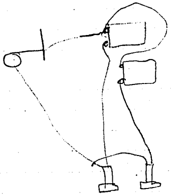
48 times



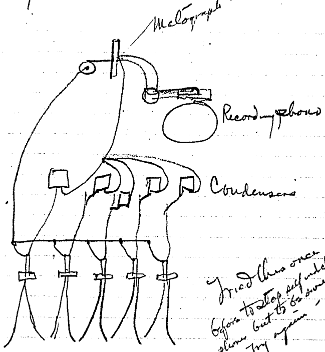
~~no sound Res 10000 ohm -~~
~~2500 Each - current. ~~milamp~~~~
~~5000 Milamp total~~
~~1250 " in each~~
~~Disturbance, 10 Milamp in .1.~~
~~fourty 1 in circuit, 40 ohm 2 volts.~~
~~50~~

Res of 1 trans 10 ohms 1 Volt -
100 milamp - disturbance, 1 ohm -
or 10% 5% up + down variation
10 milamp
2 Multiple 5 ohm 1 V
200 Milamp

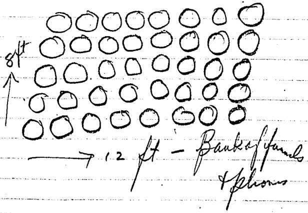
With 140 Telephone transmitters and 1 amp current, 1 Valt. Total res showed 6.1 ohm or 40 ohms per phone 10% in one phone, would not be noticed

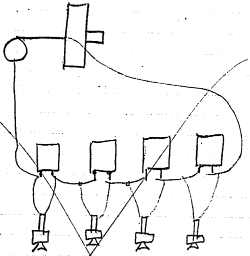


Sept 23 1910


Melograph –
Recording phono
Condensers

Tried this once before to stop self induction phones but to be sure – Try again


8 ft
12 ft – Bank of funnels & phones

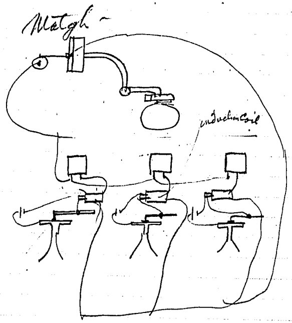


~~Think this is way I tried it before~~
~~but it don't look right.~~
~~No it was as on page back~~

Sept 23 1910

find several receivers &
test them out for sensitiveness
Have Carpenter screw them
so can put funnels on &
Fred Ott fix mouthpieces
so funnels can be attached
see if we have any Phonoplex
Sounders on stock if we
Can put ~~try~~ them

Sept 23 1910


Matgh -
induction Coil

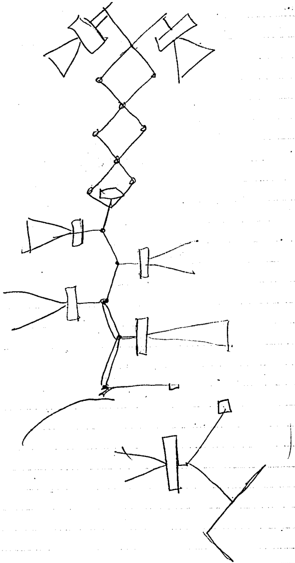
Carbon silver button &
Phonograph or
Husbands Transmitter

Make some inch rings of pressed
precipitates for recording. ZnO once tried
Cuts Easy - Try Carb Strontia
Organic precips -
Sulphide antimony presses 150 at to
a wax like but far harder Tannate Tin
Transparent & Exceedingly hard
pressed Salts of Organic acids & bases
may prove good.

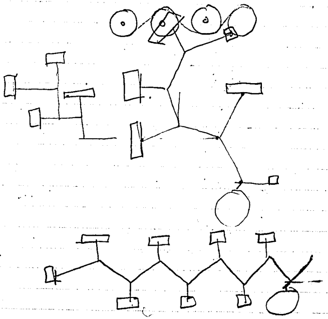
Goldstein Make some Fluoride Ca very fine
Will make cylinder several pressures
Note book 1902 say when wet with
KOH not very loud, then wet with water
rummy got loud - Try water first if
nothing use weak KOH,

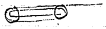
~~Powder up Tungstate K or Na very fine~~ &

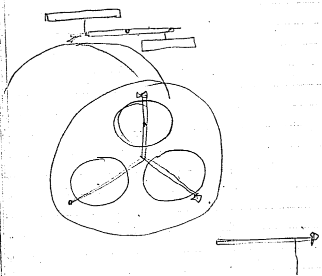
Try Tungstic acid with weak KOH,
1902 book says WO$_3$ acid with KOH is
smoothest of all, can't hear scratch with the ear tube. it works with $H_2SO_4$
but not good like KOH, 1/2 loud of $SrCO_3$
Try Molybdic acid,

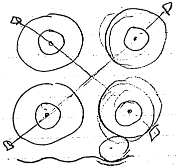


Try Bismuth Oxalate, dif pressure
do Sr Oxalate "



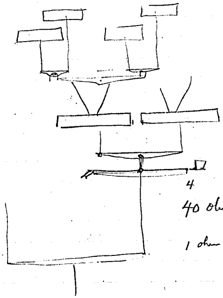






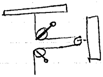
Sept 23 1910

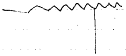
Think only way to play
Music at distance from
horn in a room & get rid of
Drown a well sound or
Echos is to Cover the Entire
room 3" thick with small
sand bags in Cotton cloth & held
in screen mesh say 1/4" mesh
then the Music & Talking will
be free of it, possibly Mattrics
8" thick packed hard would do it



40 ohms 20 –

1 ohm 1/2 ohm

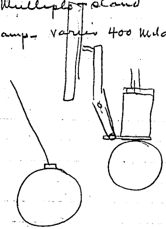




40 ohm Coil – 40 ohm res 40 volts
1 amp – pressure reduces 1/2 to 20 ohm
2 amp – 1 amp on 40 turns –

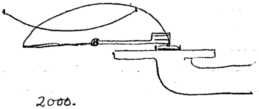
4 amp 40. Coils multiple
one coil stand 200 milamp + varies
10 milamp

40 Coils Multiple stand
8000 milamp – varies 400 milamp
but



1000 ft sec

500 Vib Sec



2000.

.10- Reduced to 1 ohm

.20- 200 ohms 10 ohms

2000 ohms - 10 ohms variation
$\frac{1}{200}$ th - in series — 10 1st 50

~~200~~ In Multiple 12/ 1/2 ohm

200- 20 100 .50

12/ 540 (45 12) 480 (
440
6

90
80
70

50
45

| | | | | | | |
|---|---|---|---|---|---|---|
| 100 | 1st | 6% - | 600 - yr | 1 month | | 50 |
| 90 | 2nd | " | 540 - | 2 | " | 45 |
| 80 | 3 | " | 480 | 3 | | 40 |
| 70 | 4 | " | 420 | 4 | | 35 |
| 60 | 5 | " | 360 | 5 | | 30 |
| 50 | 6 | " | 300 | 6 | | 25 |
| 40 | 7 | | 240 | 7 | | 20 |
| 30 | 8 | | 180 | 8 | | 15 |
| 20 | 9 | | 120 | 9 | | 10 |
| 10 | 10 | | 60 | 10 | | 5 |
| | | | | | | 5 |
| | | | | | | 280 |

280.

1.320 000 - 4000 - 2 000 000
600
1.920

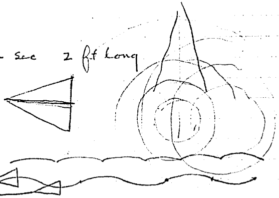
1

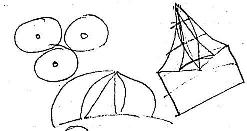
2 10

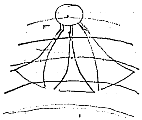
600 - 1400
90 40
5400 5610

56-
54
110
12
20
2
280
112
1.3

500- sec 2 ft Long







3)945
315
1260

1160

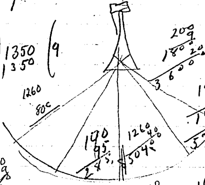
800
20
16000

800
160
64
576
64

576-

150)1350 (9
1350

200
9
1800
20
3600



1260
80c

1800
360
1440
1440
5760

190
95
285

1260
40
5040

50
9
450
1080
153

100

950
60
57000

260-

200

640
504
136
136

16)300 (18c
160
148
12

1440
1080
360

300-

.120)2000 (16.6-
120
800
720
800

250
80
20000

1440

950
570
1512

260-

1350
20
27000

2200
176
2024
20
4048
2024
24288

1350
270
1080

2200
120

2200
8
17600

2200
1760
44

1350
30
40500

1350
40
990

190
185
950
95
1520

190
80
1520

16000 ) 2550000 (16
1600000
950000
9 7 6

82
74
8
7
15

9000
7500
8000
19500
16000
2550

16

90
160
540
280
820

40
70
220

58
16
74

160
150
88
160
241
22
4
24
2

95

80

80

7

21
7
28

160
240
240
1200
3
48
4

36000

160
28
1280
1200
3
44

16000
3000

80

165

30 ) 150 (5

5 ) 200
40

40

1080

1180

150 ) 1080 (7.2
1050
3
300
144

54
3

55
300
275

1440

1340
1080
26

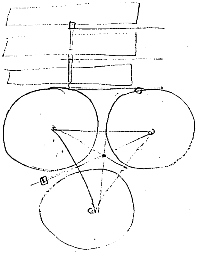
260

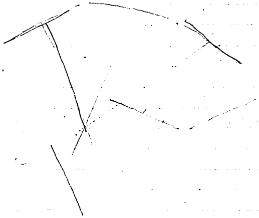
2750
2600
1500
1600
1500
7
357

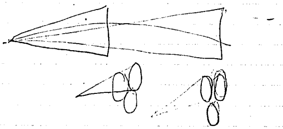
2750
4
1100
500
550

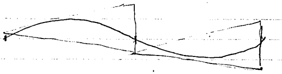
300

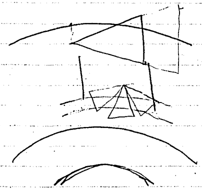
16
8
128
300
428
4

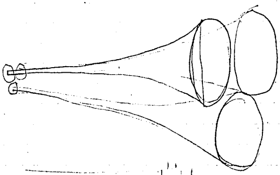


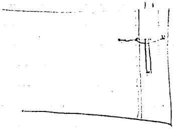


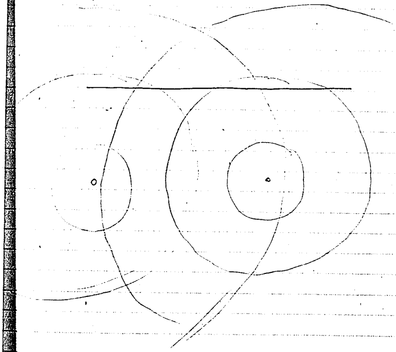


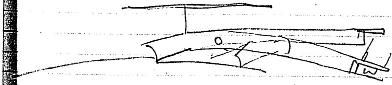








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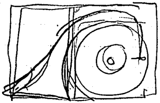

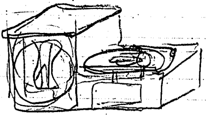

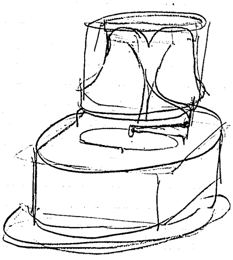

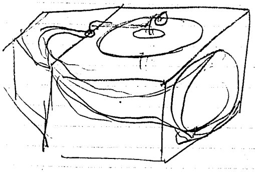

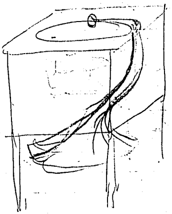

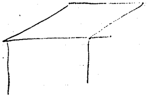

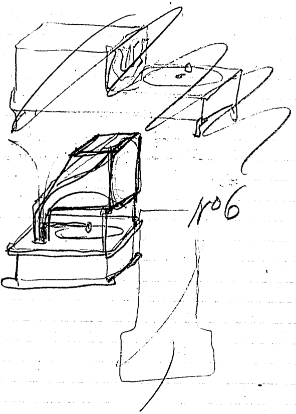
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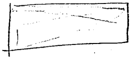

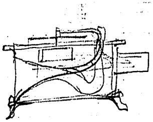

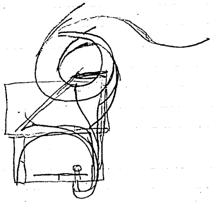

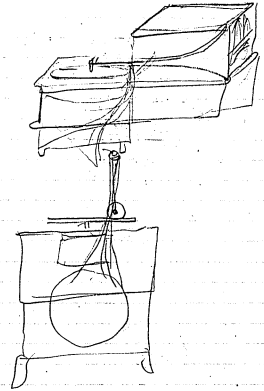

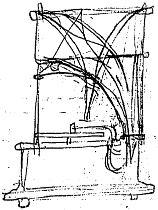

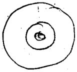

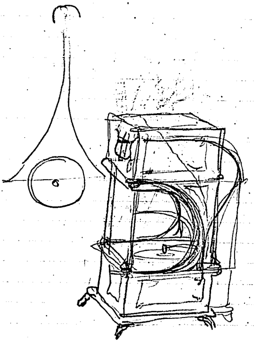

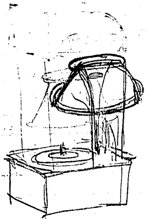

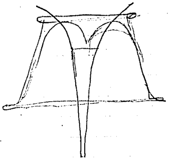

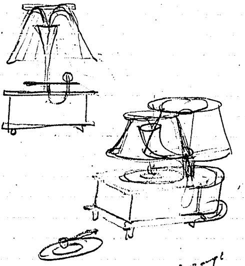

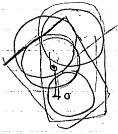

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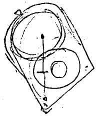

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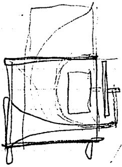

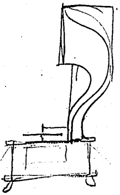

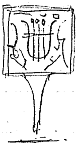

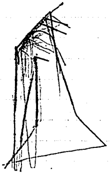

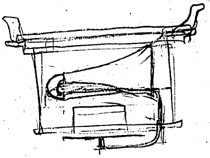

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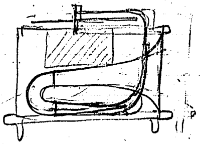

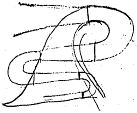

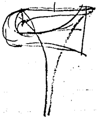

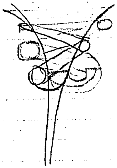

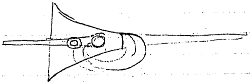

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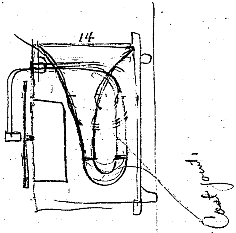
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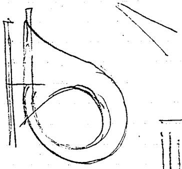

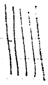

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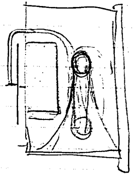

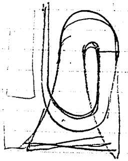

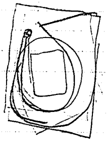

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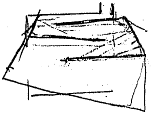

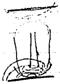

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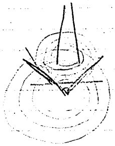

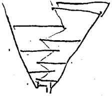

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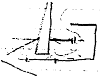

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